8103

[redacted]

(See note on Survey)

[redacted]

8103

Diag. Cht. Nos. 8802-3, 9000-1 & 9302

DECLASSIFIED
AUTHORITY Ltr Oceanav Ser 1337/ N3D
DATE 12-16-75 BY [illegible]

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PI-50352 *Office No.* H-8103

LOCALITY

State ALASKA

General locality BERING SEA

Locality CENTRAL BERING SEA

194 53

CHIEF OF PARTY

W. H. Bainbridge

LIBRARY & ARCHIVES

DATE JUNE 2, 1954

B-1870-1 (1)

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H 8103

Field No. Pi 50352

State Alaska

General locality Bering Sea.

Locality WEST OF PRIBILOF ISLANDS ~~Central Bering Sea.~~

Scale 1/ 500 000 Date of survey 17 July - 1 Sept. 1953

Instructions dated 3/6/51; 5/28/51; 6/21/51; 3/21/52; 3/4/53.

Vessel Ship PIONEER.

Chief of party W.H.Bainbridge

Surveyed by Ship's Officers.

Soundings taken by fathometer, graphic recorder, ~~hand lead, wire~~

Fathograms scaled by HCA, PAS, KAM, GEC.

Fathograms checked by HCA; PAS; KAM; GEC.

Protracted by P.A.Stark

Soundings penciled by Wm. M. Martin

Soundings in fathoms ~~feet~~ at ~~MEAN~~ MLLW are based on a velocity of Sound of 800 fm/sec.

REMARKS: Smooth sheet and positions by ship's personnel:
Soundings plotted by Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE 693019

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

8103

REGISTER No. ~~H-7951~~

Field No. PI-503-52

State Alaska

General locality Bering Sea

Locality WEST OF PRIBILOF ISLANDS ~~Central Bering Sea~~

Scale 1 ; 500,000 Date of survey 17 July to 1 Sept. 1953

Instructions dated 3/6/51; 5/28/51; 6/21/51; 3/21/52; 3/4/53

Vessel Ship PIONEER

Chief of party W. H. Bainbridge

Surveyed by Ship's Officers

Soundings taken by fathometer, graphic recorder, ~~hand lead~~, ~~wire~~

Fathograms scaled by H. C. A., P. A. S., K. A. M., G. E. C.

Fathograms checked by H. C. A., P. A. S., K. A. M., G. E. C.

Protracted by P. A. Stark

Soundings penciled by Wm. M. Martin

Soundings in fathoms ~~feet~~ at ~~MEAN~~ MLLW

REMARKS: ~~This is a continuation of previous year's work plotted on a new smooth sheet.~~ (New number assigned by Washington Office.)

Smooth sheet and positions by ship's personell.
Soundings plotted by Seatttle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE 693019

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

8103

Register No. ~~H-7951~~ (1953) Field No. PI-503-52

CENTRAL BERING SEA

Project CS-343
Ship PIONEER

Scale 1:500,000

Season of 1953
W.H. Bainbridge,
Chief of Party
Surveyed by Ship's
Officers

A. PROJECT

The work was done in accordance with the original instructions for Project CS-343, dated 6 March 1951 and Supplemental Instructions dated 28 May 1951; 21 June 1951; 21 March 1952; 4 March 1953 and 9 March 1953.

B. SURVEY LIMITS AND DATES

Northerly limit: from ∅ 59-35N, ∧ 178-30E running east to ∅ 58-40N, ∧ 172-30W.

Easterly limit: from ∅ 58-40N, ∧ 172-30W running southeast to ∅ 56-00N, ∧ 170-00W.

Southerly limit: from ∅ 56-00N, ∧ 170-00W running west to ∅ 56-50N, ∧ 177-15W.

Westerly limit: from ∅ 56-50N, ∧ 177-15W running northwest to ∅ 59-05N, ∧ 177-55E and thence to northeast to ∅ 59-35N, ∧ 170-30E.

Junction was made at the eastern limit with contemporary survey H-7950. The latter was begun by the ship PATHFINDER in 1951. An overlay of a portion of the eastern limit of survey ~~H-7951~~ 8102 (1953), covering the area immediately to the west of St. Paul Island, was sent to the Commanding Officer of the ship PATHFINDER on January 22, 1954.

Junction was made at the southern limit with H-7951 (1952) and H-7973 (1952). In the west, junction was made with survey H-7993 (1952).

No junction was made in the northern limits of this survey inasmuch as no adequate surveys of that area have been made to date.

Junction was also made with the area developed by the ship PATHFINDER in 1951: Latitudes 58-10N to 58-45N and longitudes 174-45W to 175-30W. H-7951 (1952)

On the Boat Sheet all junctions appeared satisfactory.

The hydrography applicable to this report was begun 17 July 1953 and ended 1 September 1954.

C. VESSEL AND EQUIPMENT

The 1953 hydrography was done by the ship, the turning radius of which was approximately 400 meters under average conditions.

Type 808 Depth Recorders No. 141 SP, 107S, 103S and 108S were used in depths averaging less than 100 fathoms. In greater depths, fathometers NMC No. I-766 and NMC-2 No. 117 were used.

The standard USC&GS Electronic Position Indicator was used for control. The various controllers and transmitting used are listed in Section Z of this report, Abstract of EPI Corrections.

D. TIDE AND CURRENT STATIONS

No tide or current stations were established for this survey.

8103

E. SMOOTH SHEET

Because of possible distortion of Smooth Sheet ~~H-7951~~ (1952) a new Smooth Sheet was made.

The projection and positions on the Smooth Sheet were plotted on the ship after the close of the 1953 Field Season. The lines indicated by Day Letters A to E on the Boat Sheet were run the previous season and appear on the Smooth Sheet H-7951 (1952). Soundings were not penciled by Ship Pioneer, the sheet is being forwarded to the Seattle Processing Office.

F. CONTROL STATIONS

Two EPI Stations based on the North American Datum of 1927, were used for control. EPI station NUNIVAK, 1953, located on Nunivak Island, was established in 1951 as EPI Station "D". The same location was used in 1953. EPI Station PAUL 1953, located on St. Paul Island, was established and maintained by the ship PATHFINDER in 1953.

G. SHORELINE AND TOPOGRAPHY

This was an offshore survey and no shoreline or topographic work was done.

H. SOUNDINGS

Soundings were made and recorded in the usual manner by the fathometers listed in Section C of this report.

To insure more reliable data in critical and shoal areas, an NMC-2 fathometer was run simultaneously with the 808 whenever possible. All soundings recorded on the fathometer were rescanned and verified.

In accordance with the Director's letter, dated 21 June 1951, 21/mek, S-1-P1, no velocity corrections were applied to the soundings.

I. CONTROL OF HYDROGRAPHY.

The survey was controlled exclusively by EPI Stations NUNI and PAUL,. Weak control was encountered in the southeast corner of the sheet where the EPI arcs approached tangency. Positions 11Z to 17Z and 1AA to 4AA required some adjustments as was clearly indicated in the Sounding Records. However, there was sufficient control at the ends of these lines to insure adequate control.

J. ADEQUACY OF SURVEY

Junctions with adjoining surveys were satisfactory. This survey was complete and adequate.

K. CROSSLINES.

Adequate crosslining was done in shoal and critical areas. No appreciable discrepencies were encountered.

L&M. COMPARISONS WITH PRIOR SURVEYS AND CHARTS.

This may be considered an original survey with respect to coverage and control; hence no comparisons with old data would be practicable.

N&Y. NOT APPLICABLE * OFF SHORE SHEET

Z. TABULATION OF APPLICABLE DATA.

Appended to this report are the following:

1. Abstract of EPI Arc Points.
2. Abstract of EPI Corrections.
3. Abstract of Phase Corrections of the 808 Fathometers.
4. Index of Positions and Fathograms (In processing office copy only)
5. Abstract of Statistics.
6. Approval Sheet.

Respectfully submitted:

P.A. Stark

P.A. Stark
Lt. (jg) USC&GS

Forwarded:

W.H. Bainbridge

W.H. Bainbridge
CMDR., USC&GS
Ship PIONEER

Note: Bottom samples on this survey were extracted from the following reports and added to the smooth sheet:

Pathfinder (Crosby), Temp. Report 945/TW/1953/C Acc. No. T-11147

Pioneer (Bainbridge) Spec. Report 1953 No. 162

EPI ARC POINTS FOR

CONSTRUCTION OF MICROSECOND ARCS

SHEET REGISTER NO. H ~~7951~~ 8103

FIELD NO. PI-503-52

POINT	DISTANCE	AZIMUTH	LATITUDE o	'	"	LONGITUDE O	'	"
PAUL			57	14	03.387	170	06	44.719W
	2200 u	115	58	23	02.56	175	13	26.82W
	2200 u	150	59	45	54.56	173	02	43.63W
	1400 u	115	57	59	23.71	173	19	33.60W
	3200 u	115	58	50	10.32	177	38	58.66W
	4400 u	115	59	19	00.47	179	21	12.22E
NUNI			60	03	32.31	167	14	21.66W
	1800 u	63	58	53	31.33	171	24	35.73W
	3600 u	63	57	35	57.77	175	17	41.60W
	3600 u	37	56	04	39.15	172	27	13.90W
	3600 u	89	59	37	23.11	176	49	49.18W
	5400 u	63	56	11	43.90	178	54	13.32W
	5400 u	89	59	08	54.62	178	30	41.32E

CALIBRATION OF EPI STATIONS PAUL AND NUNI

U.S.C.& G.S.S. PIONEER

1953

The calibration for EPI corrections was made while at anchor off St. Matthews Island. The ship's position was determined by sextant fixes on triangulation stations on the N. A. 1927 Datum. The datum was determined by adjustment of EPI line crossings. See "Report on Adjustment of EPI Observations, Bering Sea, Alaska" by B. K. Meade. A projection on a scale of 1: 20,000 was constructed, an arbitrary point in the anchorage selected from which inverses to the two stations were computed. The azimuth lines to the stations were drawn through this point and the distances in microseconds laid off along these lines. The ship's positions were plotted and the distance to each station obtained graphically by projecting the positions on the graduated azimuth lines. The ship was at no time over 300 meters from either line.

Ten readings were taken on each equipment combination. The stations were kept on the same sides throughout the hydrography thereby eliminating the calibration of both "A" and "B" sides for each station. Zero checks and the ship's head were recorded at the beginning and end of each set of ten readings. Frequent sextant fixes were taken during the calibration and the ship's head recorded on each fix.

The results of the calibration and the tabulation of corrections used are shown on the accompanying sheet.

CALIBRATION RESULTS

Sta. NUNI

Equipment		16 July	12 August	1 September
C-6, T-4	Mean Reading	2 038.29	2 036.18	2 036.91
	True Distance	2 038.63	2,035.07	2 035.67
	Correction	+ 0.34	- 1.11	- 1.24
C-4, T-4	Mean Reading			2 036.62
	True Distance			2 035.67
	Correction			- 0.95

Sta. PAUL

C-2, T-3	Mean Reading	2 524.72		2 525.13
	True Distance	2 521.65		2 520.45
	Correction	- 3.07		- 4.68
C-3, T-5	Mean Reading	2 523.78		2 524.93
	True Distance	2 521.60		2 520.50
	Correction	- 2.18		- 4.43
C-3, T-3	Mean Distance		2 525.36	2 525.64
	True Distance		2 520.50	2 521.05
	Correction		- 4.86	- 4.59
C-2, T-5	Mean Reading			2 525.28
	True Distance			2 520.55
	Correction			- 4.73

CORRECTIONS APPLIED

STATION EQUIPMENT	PERIODS				
	Up to 20 July	21 July to 25 July	26 July to 30 July	31 July to 3 Aug.	4 Aug. to end
NUNI					
C-6, T-4	+0.3	0.0	-0.3	-0.6	-1.1
C-4, T-4	-1.0	-1.0	-1.0	-1.0	-1.0
PAUL					
C-2, T-3	-3.1	-3.5	-4.0	-4.3	-4.7
C-3, T-5	-2.2	-2.8	-3.3	-3.8	-4.4
C-3, T-3	-4.7	-4.7	-4.7	-4.7	-4.7
C-2, T-5	-4.7	-4.7	-4.7	-4.7	-4.7

Sheet PI-503-52 ~~H-7951~~ **8103**

PHASE COMPARISON

808 Fathometer No. 103S

A	B
51.8	55.0
51.9	55.0
51.9	55.1
	55.2
M 51.87	55.08
A-B -3.21	

52.0	55.2
52.0	55.0
52.0	55.2
52.0	
M 52.0	55.13
A-B -3.13	

48.2	52.2
48.4	51.8
48.4	51.8
	51.9
M 48.33	51.93
A-B -3.60	

B	C
73.0	76.0
73.0	76.5
73.2	76.1
73.2	
M 73.10	76.30
B-C -3.10	

72.6	75.7
72.7	75.7
72.8	
M 72.7	75.7
B-C -3.00	

88.4	92.5
88.0	92.2
M 88.20	92.35
B-C -3.15	

C	D
111.5	112.0
110.0	110.0
111.0	111.0
107.5	109.0
	106.0
M 110.00	109.60
C-D +0.4	

119.0	119.0
117.0	117.8
115.0	115.5
113.0	111.8
110.8	109.5
109.5	108.5
108.0	106.5
106.2	105.2
104.8	104.2
103.0	10.26
101.6	101.0
	113.8
M 109.81	109.62
C-D +0.19	

-3.21	
-3.13	
-3.60	
M -3.31	

-3.10	
-3.00	
-3.15	
M -3.08	

+0.40		
+0.19		
M +0.20		

A	0.00	
A-B	-3.31	
B	-3.31	use -3.5
B-C	-3.08	
C	-6.39	use -6.5
C-D	+0.20	
D	-6.19	use -6.0

808 FATHOMETERS - PHASE COMPARISONS

NO. 141 SP

A	B	B	C	C	D	C-D
45.1	45.4	75.5	76.1	124.4	124.8	-0.4
45.9	46.0	74.4	75.0	112.4	112.6	-0.2
46.2	46.3	73.7	74.2	120.0	120.1	-0.1
46.7	46.5	73.4			M	-0.23
M 45.98	46.05	M 74.25	75.10			
A-B	-0.07	B-C	-0.85			

	Corrections	
A	0.00	
A-B	-0.07	
B	-0.07	use 0
B-C	-0.85	
C	-0.92	use -1.0
C-D	-0.23	
D	-1.15	use -1.0

NO. 107S

A	B	B	C	C	D	
44.2	44.7	70.3	70.3	111.8	110.6	+1.2
43.7	43.8	69.9	69.8	106.2	105.9	+0.3
43.3	43.7	69.5		109.0	108.8	+0.2
43.2					M	+0.57
M 43.6	44.07	M 69.93	70.05			
A-B	-0.47	B-C	-0.12			

	Corrections	
A	0.00	
A-B	-0.47	
B	-0.47	use -0.5
B-C	-0.12	
C	-0.59	use -0.5
C-D	+0.57	
D	-0.02	use 0.0

NO. 108S

A	B	A-B
53.2	53.7	-0.5
57.0	57.5	-0.5
57.0	57.3	-0.3
51.6	52.0	-0.4
51.0	51.4	-0.4
54.8	55.4	-0.6
57.7	58.0	-0.3
	Mean	-0.43

B	C
78.0	78.2
77.8	78.0
	77.8
M 77.9	78.0
B-C	-0.10

C	D	C-D
116.7	117.0	-0.3
110.4	110.8	-0.4
122.0	122.0	0.0
	M	-0.23

A	0.00		
A-B	-0.43		
B	-0.43	use	-0.5
B-C	-0.10		
C	-0.53	use	-0.5
C-D	-0.23		
D	-0.76	use	-1.0

APPROVAL SHEET TO ACCOMPANY

8103

Survey H~~7251~~ Project CS - 343

Field No. PI-503-52

The field work was supervised closely and the boat sheet inspected daily.

The records and smooth sheet have been inspected and are approved.

The survey is considered adequate.

W. H. Bainbridge

W. H. Bainbridge
Comdr., USC&GS
Comdg. Ship PIONEER

H 8103
Pi 50353

Bering Sea.
North and West of the Pribilofs.

Processing Office Notes.

Smooth sheet.
The projection was prepared by ship's personnel. Positions were plotted on the ship. Soundings were plotted in the Seattle Processing Office.
In Seattle, an aid to visualizing the area of the survey, St. Paul Island and the west part of St. George were transferred from Chart 8995 of 12/1/52. This shoreline was not inked.

Sheet number.
The field party used the number 7951 which was prepared to cover this area and partly surveyed in 1952. The 1952 work consisted chiefly of the development of the 100 fathom curve. That work was plotted on a smooth sheet and sent to Washington.
The field party plotted the positions of the 1953 survey on a new projection. When this matter was referred to the Washington Office the number H 8103 was assigned for the new sheet.

Crossings.
In the vicinity of ϕ 57 00 λ 171 30 crossings of EA-day with J, L & Y days disagree about a fathom. Fathograms were re-scanned but the difference was not resolved.
At ϕ 57 00 λ 172 50 BA day soundings are one to two fathoms deeper than Y-day and H-day lines. The BA line along meridian 172 50 frequently differs by a fathom from crossed lines. At ϕ 57 10 λ 172 48 Position 20 - 21 BA-day is two fathoms deeper when crossing Pos. 44 - 45 H-day.
The line from Pos. 24 K-day(λ 57 39 λ 172 51) thru Pos. 8 L-day is one to two fathoms deeper than crossed lines.

Review, par. 2

See note "Crossings" next page

Curves.
Sheet H 7951 was projected on H 8103 and the curves were drawn to fit both sheets within the common area. Between controlling soundings the curves of H 7951 would be modified somewhat on account of the additional information available on H 8103. The curves of the latter sheet are deemed correct.

Outstanding features.

ϕ 57 43	λ 174 05	47 fathoms.
57 ~~38~~ 43	175 40	945 fathoms.
58 30	175 00	Marine Canyon.
59 20	178 00	Marine Canyon.

Chart 9000.

The 80 fathom sounding at ϕ59 03 λ 178 15 is very good, but the 750 fathoms to NE of the 80 fathoms is misplaced. It should be shifted to the westward about forty minutes.

Dangers.

No dangers were revealed within the sounded area. However, it is remembered that there is a two fathom sounding just outside of the sounded area abreast of St. Paul Island.

Edgar F. Smith

Edgar F. Smith
Cart. Engr.

12 May 1954.

H-8103 "Crossings" 21 May 1954

More work was done upon this sheet in an effort to resolve some of the two fathom crossings and to improve the delineation of the 60 fathom curve. There remains on the sheet 4, 2 fathom crossings that we were unable to improve by rescanning the fathograms, they are as follows: Review, par. 2.

ϕ		λ	
57	35	172	48
58	12	172	48
58	14	173	50
58	48	173	36

The crossline from position 56 VA to 7 WA appears to be 1 to 2 fathoms too deep. Crossings could be improved by adding 25 micro seconds to EPI PAUL.

Glenn W. Moore
Commander.

H 8103
Pi 50352

Bering Sea.
Central part - west & north from Pribilof Is.

List of Geographic Names
Penciled on Smooth Sheet.

Bering Sea

St. Paul Island

St. George Island

H 8103
Pi 50352

Bering Sea-
Central Part.

Tide Note.

No tide corrections were applied to the soundings of this sheet.

STATISTICS FOR HYDROGRAPHIC SURVEY H ~~7951~~ (1953)

8103

Ship PIONEER Project CS - 343

Day Letter	Date	Volume No.	No. of Positions	Statute Miles
A-E	Hydrography of 1952			
F	17 July	1	24	190
G	18 July	1	6	47
H	19 July	1	45	398
J	20 July	1 & 2	55	432
K	21 July	2	50	358
L	22 July	2 & 3	53	357
M	23 July	3	53	390
N	24 July	3 & 4	50	426
P	25 July	4	51	402
Q	26 July	4	51	436
R	27 July	4 & 5	49	455
S	28 July	5	49	450
T	29 July	5 & 6	53	447
U	30 July	6	51	451
V	31 July	6 & 7	59	461
W	1 Aug.	7 & 8	57	447
X	2 Aug.	8	53	448
Y	5 Aug.	9	40	341
Z	8 Aug.	9	17	111
AA	9 Aug.	9 & 10	34	263
BA	13 Aug.	10	24	226
CA	14 Aug.	10 & 11	57	456
DA	15 Aug.	11	57	446
EA	16 Aug.	11 & 12	58	453
FA	17 Aug.	12	34	233
GA	18 Aug.	12 & 13	53	401
HA	19 Aug.	13 & 14	51	335
JA	20 Aug.	14 & 15	51	340
KA	21 Aug.	15	54	422
LA	22 Aug.	15 & 16	56	454
MA	23 Aug.	16 & 17	56	424
NA	24 Aug.	17	60	451
PA	25 Aug.	18	53	454
QA	26 Aug.	18 & 19	56	443
RA	27 Aug.	19 & 20	54	455
SA	28 Aug.	20	53	436
TA	29 Aug.	21	53	387
UA	30 Aug.	21 & 22	52	331
VA	31 Aug.	22	63	277
WA	1 Sept.	22	7	49
	TOTALS		1899	14,783

TOTAL Area of survey 71,236 square statute miles.

839

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~: 3 August 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
22 volumes of sounding records for

HYDROGRAPHIC SHEET 8103

Locality Bering Sea, Alaska

Chief of Party: W. H. Bainbridge in 1953
Plane of reference is mean lower low water
ft. on tide staff at
ft. below B. M.

NOTE: Tide reducers not entered and are unnecessary on account of deep soundings.

Condition of records satisfactory except as noted below:

E. C. McKay
Tides Branch

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 756675

GEOGRAPHIC NAMES

Survey No. H-8103

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H		
Alaska										1
Bering Sea										2
St. Paul Island										3
St. George Island										4
										5
										6
					Names approved					7
					6-25-54. L. Heck					8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8103

Records accompanying survey:

Boat sheets 1; sounding vols. 22; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 18 Eny.

special reports, etc. 1 Descriptive Report; 1 Smooth Sheet; 1 Cahier-E.P.J.

Plotting Abstracts:.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		1899
Number of positions checked		10256
Number of positions revised		04
Number of soundings revised (refers to depth only)		2✓
Number of soundings erroneously spaced		051
Number of signals erroneously plotted or transferred		.....
Topographic details	Time	.....
Junctions	Time	.....
Verification of soundings from graphic record	Time	416

Prelim. Verification: T.A. Dinsmore 44 hrs. 19 Aug. 1954

Verification by R.T. McBride Total time 128 hrs. Date 23 Oct. 1957

Reviewed by T.A. Dinsmore Time 20 Date 24 Aug. 1954

Addendum by William K. Roberts .58 3/24/66

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8103 FIELD NO. PI-50352

Alaska, Bering Sea, West of Pribilof Islands

Project CS-343

Surveyed - July - Sept., 1953 Scale 1:500,000

Soundings: Control:

808 Fathometer E. P. I.
NMC "
NMC-2 "

Chief of Party - W. H. Bainbridge
Surveyed by - Ship's Officers
Protracted by - P. A. Stark
Soundings plotted by - W. M. Martin
Preliminary Verification by T. A. Dinsmore
Verified and inked by - R.T. McBride
Reviewed by - T. A. Dinsmore 24 August 1954
Inspected by - R. H. Carstens

1. Shoreline and Control

This is an offshore survey. The pencilled outline of the Pribilof Islands on the east is shown only to aid in identifying the locality of the survey.

The origin of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are generally in very good agreement. Differences of 1-2 fms. in a few localities are considered unimportant in this deep-water area.

3. Depth Curves and Submarine Relief

The usual depth curves are adequately delineated.

In depths less than 80 fms. and greater than 1500 fms., the

bottom is relatively smooth. In depths of 80 to 1500 fms., along the continental slope, the bottom drops rapidly. In this area, several prominent canyons and ridges contribute to the irregularities indenting the slope. A least depth of 47 fms. rises sharply in lat. 57°43', long. 174°06' W, from greater surrounding depths.

4. Adjoining Surveys

The present survey junctions adequately with the following adjoining surveys:

H-7950 (1951-53) on the east
H-8072 (1953) on the east
H-8002 (1952) on the southeast
H-7949 (1951) on the southeast
*H-7951 (1952) on the south
H-7993 (1952) on the west

*H-7951 also covers the area in the vicinity of lat. 58°30', long. 175°00' W.

There are no adjoining surveys on the north.
The transfer of junctional soundings is deferred pending the complete verification of the present and adjoining surveys.
See addendum.

5. Comparison with Prior Surveys

There are no prior surveys in the area by this Bureau.

6. Comparison with Chart 8802 (Latest print date 12/29/52)
8995 (" " " 6/14/54)
9000 (" " " 10/6/52)
9302 (" " " 6/15/53)

A. Hydrography

(1) Chart 8802, - Charted hydrography originates principally with early trackline surveys supplemented by partial application of the present survey through blueprint 48426. Numerous differences amounting to as much as 20 fms. in depths of 65 fms. are noted between the charted and smooth-sheet depths. The charted information is superseded by the present survey.

(2) Chart 8995, - Charted hydrography originates principally with advance information of the present survey as shown on blueprint 50576 supplemented by soundings from those adjoining surveys on the east which overlap the present survey. Numerous soundings from old trackline surveys still remain

on the chart. The early soundings many of which are considered unreliable differ as much as 20 fms. in 65-fm. depths from the present survey depths in smooth bottom. The most conspicuous example occurs in the vicinity of lat. 56°35', long. 171°12', where four prior trackline soundings of 45-48 fms. fall in smooth-bottom depths of 65-68 fms. on the present survey.

Other discrepancies are indicated in the following examples:

Latitude	Longitude	Charted Depths	Survey Depths
57°01.7'	171°03'	51	55 ✓
56°57.5'	170°54.3'	42	56 ✓
56°51.8'	171°06.5'	48	60
56°38.2'	171°16.3'	75	65
56°34.7'	170°57.3'	72	66
56°28.5'	170°35'	47	66
56°20.2'	170°36.4'	52	65

above soundings removed from 8802 & 9000

Except for the soundings originating with overlapping contemporary surveys on the east, the charted information is entirely superseded by the present survey.

(3) Chart 9000,- Charted hydrography originates with trackline sounding by the U.S. Navy and this Bureau. A comparison of the depths on the survey and chart reveals appreciable differences. The most conspicuous examples are the 26-fm. sounding charted in lat. 56°03', long. 170°30' W., which falls in present survey depths of 500-1000 fms. and the 750 fms. charted in lat. 59°17', long. 177°50' W., where depths of about 300 fms. were obtained on the present survey. The differences are attributed to the dead-reckoning control and inaccuracies in the sounding methods of the prior trackline surveys. Many shoaler depths are revealed by the more complete coverage of the present survey. The 47-fm. sounding which represents the peak of the ridge in lat. 57°43', long. 174°06' W., is especially noteworthy.

The present survey supersedes the charted information.

(4) Chart 9302, - The comparison between Chart 8802 and the present survey is also applicable to Chart 9302.

B. Aids to Navigation

No aids to navigation are charted in this open-sea area.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive.

b. The preliminary verification of the survey indicates that the smooth plotting was accurately done. The preliminary verification was generally confined to sounding-line crossings and unnatural submarine relief. A pattern of sounding lines covering the general area have been verified and inked. Completion of the verification and inking is deferred until some future date at which time a further inspection of the depth curves and junctions will be made.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

The survey is considered to be basic for the area covered and no additional field work is necessary.

Examined and approved

H. R. Edmonston
Chief, Nautical Chart Branch

E. R. McCarthy
Acting Chief, Division of Charts

G. R. Fish
Chief, Hydrography Branch

Earl O. Heaton
Chief, Division of Coastal Surveys

Addendum to Review

H-8103 (1953)

Verification and inking completed by-------R. T. McBride
Curves inked by----------W. K. Roberts
Review addendum by----------W. K. Roberts
Inspected by----------R. H. Carstens

The verification of H-8103 has been completed. Soundings and depth curves have been completely inked. Junctional sounding have been transferred.

Junction with Contemporary Surveys

Adequate junctions were completed with H-7993 (1952 on the west and H-8072 (1953) on the east. A butt junction was made with H-8072 which is a larger scale basic survey and is adequate to supersede the present survey in the common area. Comparisons made with all other unverified adjoining surveys mentioned in the review indicate adequate agreement. Junctions with those surveys will be discussed in their respective reviews.

Comparison with Charts

8802 (Latest print date 11/22/65)
8995 (Latest print date 7/16/62)
9000 (Latest print date 1/18/65)
9302 (Latest print date 12/14/64)

The charted hydrography in the area of the present survey originates principally with the present survey after preliminary verification and review supplemented by boat sheets and unverified smooth sheets of overlapping contemporary surveys and a few trackline soundings from H-7114. With the exception of some minor differences of one to two fathoms the charts and the survey are in agreement.

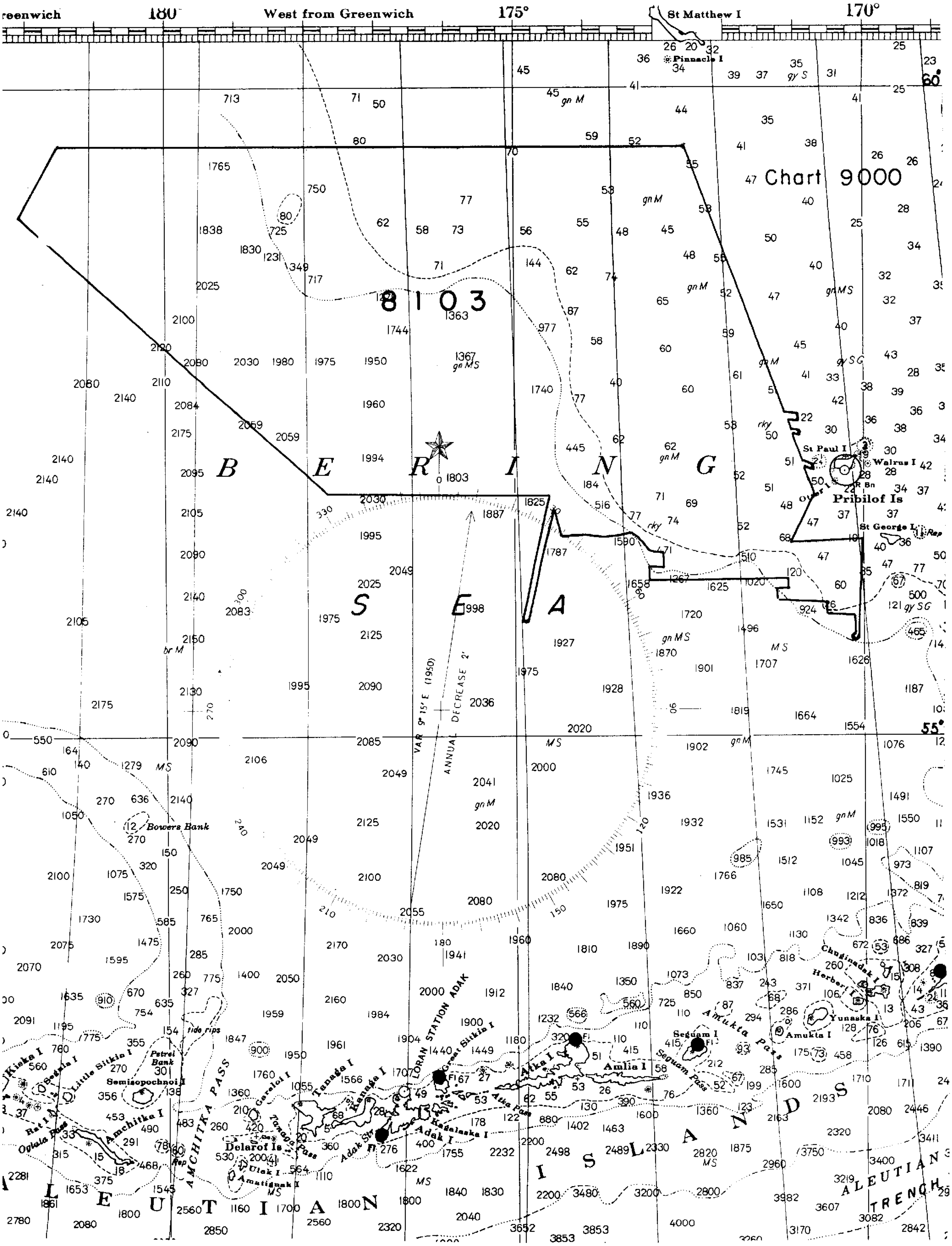
Condition of the Survey

A. Completion of verification and inking reveals that the smooth plotting was well done.

B. The Descriptive Report is complete and comprehensive.

Approved:

Lorne G. Taylor
Captain, USESSA
Chief, Marine Chart
Division



West from Greenwich
180°
175°
170°
60°
55°
St Matthew I
Pinnacle I
Chart 9000
8103
B E R I N G
S E A
St Paul I
Walrus I
Pribilof Is
St George I
Bowers Bank
Petrel Bank
tide rips
VAR 9° 15' E (1950)
ANNUAL DECREASE 2'
AMCHITKA PASS
LORAN STATION ADAK
Kiska I
Little Sitkin I
Semisopochnoi I
Amchitka I
Rat I
Oglala Pass
Delarof Is
Ulak I
Amatignak I
Gareloi I
Tanaga I
Tanaga Pass
Kanaga I
Adak I
Great Sitkin I
Kagalaska I
Atka I
Atka Pass
Amlia I
Seguam I
Seguam Pass
Amukta Pass
Amukta I
Yunaska I
Herbert I
Chuginadak I
A L E U T I A N   I S L A N D S
ALEUTIAN TRENCH

CLASSIFIED DATA:
Soundings which indicate the continental shelf not applied at this time. Authority R.H.C. 7ma Oct. 1954

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8103

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
Oct. '54	9302	G.H.E.	~~Before~~ After (preliminary) Verification and Review — To be re-applied when and if survey is declassified.
March 31 1955	9302	Benson	~~Before~~ After (Prelim.) Verification and Review — Fully applied ~~except for curves~~ depth curves added after de-classification 7 mar. GHE
Mar. 30-1955	8802	GHE	~~Before~~ After (Prelim.) Verification and Review
Apr. 1, 1955	9000	Benson	~~Before~~ After (Prelim.) Verification and Review — 7ma
3-26-57	8994	R.K. DeLaubenfels	~~Before~~ After (Prelim) Verification and Review (No correction) 7ma
3-27-57	8995	R.K. DeLaubenfels	~~Before~~ After (Prelim) Verification and Review. Revised & deleted adgs mentioned in review.
4-9-70	8995	H. Ladd	~~Before~~ After Verification and Review — Addendum to Review 7ma / Consider adequate appl until reconstr.
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.